

REMARKS

Claims 10-30 remain in this application.

The examiner indicated that claims 12-13, 16-19, 22, 26, and 30 contain allowable subject matter. Claims 12 and 16 have each been made independent by incorporating the language from former claim 10, and additionally, for claim 16 the language of claim 14 has also been added. Claim 18 seems to be related to claim 16, and thus has been made dependent on claim 16. Therefore, claims 12, 16, 18, 22, 26 and 30 should now clearly be allowable.

By this amendment also, claim 10 has been revised so as to now clearly recite that the solid lubricant film is applied in the region of the microscopic indentations, a limitation which none of the cited references teach.

From the references to Stiefel et al and Meyer et al, it is known in each case to provide microscopic indentations in the ring which is supported by the eccentric of the driveshaft. It is also known from the Stiefel et al reference, according to column 4, lines 9-14, that a support element 40 resting on the ring 28 may comprise plastic, preferably PEEK or polyimide. The text passage in Stiefel et al which the examiner cited, column 3, lines 17-30, relates to a bearing sleeve 29 by way of which the ring 28 is supported on the eccentric. This passage of Stiefel et al does not relate to contact between the ring 28 and slide plate 39.

In contrast to this, claim 10 recites, in addition to structure which is more or less equivalent to ring 28 and slide plate 39 of Stiefel et al, an intermediate layer of solid lubricant film which is applied to the area of indentations. Stiefel et al **does not teach such an added**

layer of solid lubricant. The Stiefel et al reference simply does not teach a solid lubricant applied to the ring 28 in the region of the microscopic indentations.

Applicants' application, particularly at paragraphs 13, 16, 17, 18 and 19 disclose that this added film, which, as taught only by applicants, is applied over and above the structure which can be found in the teachings of either Stiefel et al or Meyer et al.

From the Ricco reference it is known to provide a sliding block 66, resting on the ring 39, with a solid lubricant 70, for instance PTKE. Microscopic indentations are not provided in Ricco, and thus the solid lubricant 70 cannot be read as applied to a surface in the region of microscopic indentations. Moreover, Ricco recites material 70 to be a layer, which in this environment cannot be said to be a film as recited in applicants' claim 10, and even further, the layer 70 of Ricco cannot in any way be considered to be applied to an area of microscopic indentations as recited in applicants' claim 10.

As mentioned above, claim 10 has been amended to further clarify that the solid lubricant film is applied specifically in the region of the microscopic indentations, either to the ring or to the support element as appropriate. As disclosed in applicants' specification at paragraph 16, fuel can accumulate in the indentations in the solid lubricant film 40, as a result of which fuel the lubrication between the ring 18 and the support elements 24 is improved. At the onset of operation of the high-pressure pump, the solid lubricant film 40 is present between the contact regions of the ring 18 and the support elements 24 and facilitates the startup of the high-pressure pump; however, the solid lubricant film 40 is worn away during operation of the high-pressure

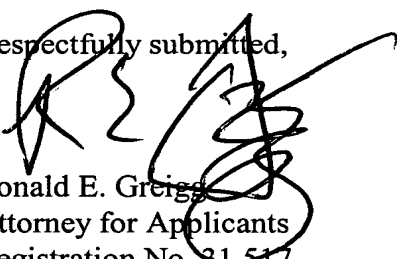
pump. After a certain length of operation of the high-pressure pump, the solid lubricant film 40 will be present any longer only in the microscopic indentations 42. If further wear of the ring 18 occurs, more and more lubricant constantly escapes from the microscopic indentations 42 and improves the lubrication between the ring 18 and the support elements 24. The microscopic indentations with the solid lubricant are not merely a seemingly arbitrary combination of the individual characteristics known from the prior art, but instead yield particular advantages as already set forth in paragraphs 16-19. From the prior art, one skilled in the art moreover finds no suggestion whatsoever of combining the microscopic indentations and the film of solid lubricant.

Regarding claim 28, it is pointed out that to optimize the adhesion of the solid lubricant film 40 to the ring 18, a chemical pretreatment of the surface of the ring 18 may be performed, such as phosphating, by which an adhesion-promoting intermediate layer 44 is created. This intermediate layer should be applied in such a way that it does not level off the microscopic indentations 42. At maximum, the thickness of the intermediate layer should be approximately 20% of the depth of the microscopic indentations 42. The prior art of record clearly does not teach this critical intermediate layer.

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For the above reasons, entry of the amendment and allowance of the claims are
courteously solicited.

Respectfully submitted,



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